

PROCEEDINGS  
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A NEW SPECIES BELONGING TO THE GENUS  
MYZOCALLIS (APHIDIDAE)

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The species described herewith and believed to be new to Science has been under rather close observation for two seasons. The opportunity is taken to discuss briefly its affinity to several other very closely allied species one of which has been heretofore considered a synonym.

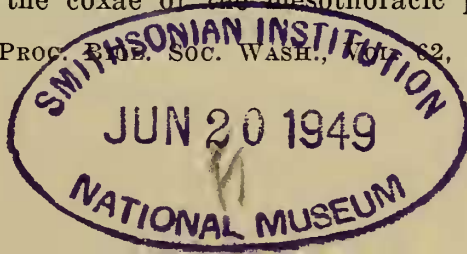
***Myzocallis tonkawa***, new species

*Alate viviparous female.*

Size and general color.—Average length from vertex to tip of anal plate 2.06mm. Range in size from 1.71-2.43mm. Both extremes represented by a single specimen. Most common length about 2.21mm. Width of head through the eyes .43mm. The color of this species is quite variable. Some specimens are pale yellowish-green, others are dusky yellow, while still others may have the head and prothorax a pale pink or orange with the abdomen green. As a rule the margins of the head show more or less dusky and the same may be said for the whole of the mesothorax which may also be light brown. The cornicles are concolorous with the abdomen, but may be slightly lighter in color. The cornicles are never dusky. Cauda and anal plate more or less concolorous with abdomen with the margins light dusky. First and second antennal segments dusky brown, darker on median margins. Third, fourth, fifth and sixth antennal segments light dusky with varying amounts of darker dusky to brown near the apex. The secondary sensoria on the third segment are commonly surrounded by dusky patches. Femora pale dusky-green with dorsal portions darker. Tibiae with a brownish spot near the knee, remaining portion light dusky as a rule but sometimes rather dark. Apex of tibiae not much if any darker than region above.

Stigma dusky. Veins brown surrounded by fuscous and ending in dusky areas before margin of wing. Anal vein as a rule darkest and surrounded by darkest area. Anal cubital and radial sector originating in dusky areas.

Head and appendages.—Comparative length of antennal segments as follows: III .786-.858 ave. .84mm., IV .51-.60 ave. .55mm., V .443-.514 ave. .47mm., VI .20-.228 ave. .22mm., + .312-.328mm. Secondary sensoria confined to the third antennal segment and numbering from seven to fifteen each represented by a single antenna. Ten to twelve sensoria are common. The first two or three sensoria are slightly oval the other sensoria are round. All sensoria have wide rims. The rostrum reaches about half way to the coxae of the mesothoracic pair of legs. The anterior



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margin of the head has a well developed tubercle. The dorsum of the head has two pair of wart-like tubercles each terminated by a short hair. These structures are difficult to determine unless the specimen is mounted on the side.

Thorax and appendages.—The dorsum of the prothorax has two pair of finger-like tubercles which are subequal in length. The dorsum of the mesothorax has a single pair of tubercles which have a much wider base than those on the prothorax. The radial sector is long and forms an acute angle with the margin of the wing. The second branch of the media is midway between the first branch and the margin of the wing. The outer surface of the wing is scale-like. The hind tibiae are from 1.35-1.44mm. long. The hair on the tibiae is sparse. The hind tarsi are from .1-.128mm. long.

Abdomen.—The segments anterior to the cornicles are provided with well-developed lateral tubercles, these are blunt at the tip and rather wide at the base. The dorsum of the abdomen has six pair of finger-like tubercles. Of these the first two pair are about equal in length and as a rule better developed than the third and fourth pair. The fifth and sixth pair of tubercles on the abdomen are often represented by mere nubbins. The cornicles are typical of the genus and vary in length from .1-.128mm. The anal plate is deeply divided and the cauda knobbed. Both the anal plate and the cauda are provided with long rather spine-like hair.

#### *Alate male.*

Size and general color.—Length from vertex to tip of anal plate 1.67mm., width of head through the eyes .43mm. Head dusky with the margins darker. Prothorax dusky green. Mesothorax brown. Abdomen with anterior portion greenish and the portion posterior to the cornicles light yellowish. Cornicles light dusky. Cauda and anal plate dusky brown. Gonapophyses dark brown with a lighter area near the base. Femora uniform dusky. Tibiae brown at the base remainder uniform dusky. Antennal except for segments I and II which are darker light dusky.

Head and appendages.—Antennal segments with the following proportional lengths: III .786mm., IV .457mm., V .429mm., VI .214+.347mm. Secondary sensoria arranged as follows: III 43-48, IV 18-25, V 11-14, VI 1. The sensoria are uniformly distributed. Rostrum short. Dorsal tubercles lacking.

Thorax and abdomen.—Wings as in alate viviparous female. Hind tibiae 1.21mm. long. Hind tarsi .128mm. long. Tubercles apparently lacking on both thorax and abdomen. Anal plate entire, cauda knobbed. Gonapophyses large and very well supplied with hair, some of which originate, in light colored areas.

This species may be collected on the under side of the leaves of *Quercus gunnisonii* a scrub oak. It is never abundant and may best be taken by sweeping with a net. I have often taken it along with *Myzocallis alhambra* Davidson. However it appears later than *alhambra* in the spring and remains several weeks in the fall after *alhambra* has disappeared.

This species is very closely allied to three other species which have much in common. The species are *Myzocallis kiowanica* which I described from the same general region, *Myzocallis californicus* Baker and *Myzocallis maureri* Swain which has I think unjustifiably been considered a synonym of *californicus*. *Myzocallis tonkawa* differs from the above

mentioned species as follows: the greater number of tubercles on the dorsum of the abdomen, the greater number of secondary sensoria on the third antennal segment, although *californicus* may have as many sensoria at times as are represented by the minimum number in *tonkawa*. In *californicus* the first pair of abdominal tubercles is shorter than the second pair, which is not true in *tonkawa*. The radial sector is longer in *tonkawa* and forms a differed angle with the margin of the wing than the radial sector of the other three species. The shape of the radial sector and hence the shape of cell  $R_1$  is also different.

Prof. Palmer and Prof. Essig have kindly supplied me with material of both species for study. This material contained males which may be easily separated into two species on the basis of color marking on the dorsum of the abdomen and secondary sensoria as well as size. These males differed from the male here described, and should furnish a basis for separating *californicus* from *maureri* should other factors, such as size, the number of secondary sensoria, the shape of the radial sector and the angle it makes with the margin of the wing, and the relative length of the radial sector to the length of the anal vein fail as valid factors to differentiate the two species.

Holotype slide deposited in the United States National Museum with the following data:

U.S. National Monument Grand Junction, Colorado, Sept. 22, 1947

*Quercus guinnisonii* Alate viviparous females.

Allotype alate male Oct. 24, 1947 U.S. National Grand Junction, Colo. Thirty paratypes taken on various dates during 1947-48.